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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,375	07/13/2005	Jani Vare	006136.00005	3973
22907 7590 10/14/2009 BANNER & WITCOFF, LTD. 1100 13th STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051				
EXAMINER				
CHOKSHI, PINKAL R				
ART UNIT		PAPER NUMBER		
2425				
MAIL DATE		DELIVERY MODE		
10/14/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,375

Applicant(s)

VARE ET AL.

Examiner

PINKAL CHOKSHI

Art Unit

2425

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 09/23/2009 have been fully considered but they are not persuasive. Applicant alleges that Ikeda does not teach that the service information is split into sub-table each identifying a certain transport stream that comprises a local transport stream of a certain cell. Examiner respectfully disagrees. Ikeda discloses (col.8, 14-18) that the Service Information includes items that describe information necessary for identifying the services (programs) provided in the service areas. Ikeda further discloses (col.9, lines 12-18) that each service area has its own service (program) list, which shows information relating to transport streams being transmitted in that specific service area, is arranged (split) in a form of a table from TS. The rejection is maintained.

Furthermore, Applicant asserts that Ikeda does not teach establishing a mother table to maintain sub-tables of the certain TS and the adjacent TS, wherein adjacent TS comprise TS of at least one neighboring cell of certain cell. Examiner respectfully disagrees. Ikeda discloses (col.9, lines 58-60; col.10, lines 28-33) that the NIT is made to describe information on the TS being transmitted in the original service area and the adjacent service areas as represented in Fig. 8. The rejection is maintained.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208

USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With regard to the dependent claims, the respective rejections are maintained as Applicant has only argued that the secondary references do not cure the deficiencies of Szucs and Ikeda, nevertheless it is the Examiner's contention that Szucs and Ikeda do not contain any deficiencies.

The rejections relied on the references for all the teachings expressed in the text of the references and/or one of ordinary skill in the art would have reasonably understood from the texts. Only specific portions of the texts have been pointed out to emphasize certain aspects of the prior art, however, each reference as a whole should be reviewed in responding to the rejection. See the rejection below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-12, 17-22, 25-29, 31-35, 38, and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over EP Patent EP 0917355 A1 to Szucs et al (hereafter referenced as Szucs) in view of WO Publication 02/11328 to Ikeda et al. (hereafter US Patent 7,475,418 will be used as a certified translation).

Regarding **claim 1**, “a method comprising: establishing at least one service information table configured to enable an end user terminal to obtain transport streams transmitted over a digital broadcast network” reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (¶0003 and ¶0012) that the transport streams provided using either cable, terrestrial or satellite network to receiver includes full service information.

Szucs meets all the limitations of the claim except “splitting the at least one service information table into sub-tables, wherein each sub-table identifies a certain transport stream, and wherein said certain transport stream comprises a local transport stream of a certain cell.” However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8.

As to “establishing a mother table configured to maintain a sub-table of the certain transport stream and sub-tables of adjacent transport streams of the certain transport stream, wherein said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell” Ikeda discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being

broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 2**, "a method wherein the sub-table comprises a for loop of the at least one service information table" Szucs discloses (§10024) that the service description table includes a service loop.

Regarding **claim 3**, "a method wherein the for loop comprises a section of the at least one service information table" Szucs discloses (§10024) that the event loop comprises event 1 and event 2 which is part of service description table.

Regarding **claim 4**, "a method wherein the for loop comprises a cycle of for loops of the at least one service information table" Szucs discloses (§10024) that the event loop comprises a checksum of a cyclic redundancy check CRC.

Regarding **claim 5**, "a method wherein the for loop comprises a transport stream identifier for uniquely identifying the certain transport stream of the sub-

table” Szucs discloses (§0024) that the newly generated transport stream includes newly generated section header data, to identify the stream, and newly generated transmission information loop.

Regarding **claim 6**, Szucs meets all the limitation of the claim except “a method wherein at least one headend equipment for a cell of the digital broadcast network performs the step of splitting.” However, Ikeda discloses (col.4, lines 57-63) that the transmitter of each service area transmits the transport stream with link information that shows transport stream of its service area. In addition, same motivation is used as to reject claim 1.

Regarding **claim 7**, “a method wherein an operator runs the at least one headend” Szucs discloses (§0012) that the receiver receives information from broadcast medium such as headend as represented in Fig. 13 (element 5).

Regarding **claim 8**, “a method wherein at least one the service information table comprises a Bouquet Association Table” Szucs discloses (§0019) that the transport stream analyzer analyzes program association table which is a part of service information.

Regarding **claim 9**, “a method further comprising building a local table based on the sub-table of the certain transport stream” Ikeda discloses (col.5,

lines 27-32) that the transmitter transmits service list of the programs offered in the service area. In addition, same motivation is used as to reject claim 1.

Regarding **claim 10**, "a method wherein the mother table identifies an amount of the sub-tables" Ikeda discloses (col.7, lines 58-62) that the link information shows the program of one service area and the adjacent service areas. In addition, same motivation is used as to reject claim 1.

Regarding **claim 11**, "a method wherein the mother table identifies an updating of the sub-table" Ikeda discloses (col.4, lines 33-38; col.7, lines 52-62) that the system controller controls the operation of each transmitter by generating link information of service areas based on the location of receiver. In addition, same motivation is used as to reject claim 1.

Regarding **claim 12**, "a method further comprising the step of updating the adjacent transport streams periodically about the sub-table" Ikeda discloses (col.4, lines 33-38; col.7, lines 52-62) that the system controller controls the operation of each transmitter by generating link information of service areas based on the location of receiver. In addition, same motivation is used as to reject claim 1.

Regarding **claim 17**, "a method further comprising the step of performing a handover function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another as represented in Fig. 1. In addition, same motivation is used as to reject claim 1.

Regarding **claim 18**, "a method further comprising the step of performing a roaming function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another to maintain communication as represented in Fig. 1. In addition, same motivation is used as to reject claim 1.

Regarding **claim 19**, "a method wherein the certain transport stream comprises a local transport stream of a cell of the digital broadcast network" Ikeda discloses (col.4, lines 12-23) that the broadcast transmitted from each transmitter is digital broadcast. In addition, same motivation is used as to reject claim 1.

Regarding **claim 20**, "a method wherein the transport streams comprise MPEG transport streams" Szucs discloses (§0001) that the method distributes MPEG-2 transport streams on a network.

Regarding **claim 21**, "a method wherein the transport stream comprises transmission according to Digital Video Broadcasting" Szucs discloses (§0003) that the tuner in television set receives Digital video broadcasting (DVB) services.

Regarding **claim 22**, "a method wherein the transport stream comprises a terrestrial digital video broadcasting (DVB-T)" Szucs discloses (§0028) that the transport streams carried by the broadcasting medium is terrestrial.

Regarding **claim 25**, "a method comprising: establishing service information configured to enable at least one end user terminal to obtain a sub-table of the service information within broadcast transport streams" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (§0003 and §0012) that the transport streams provided using either cable, terrestrial or satellite network to receiver includes full service information.

Szucs meets all the limitations of the claim except "wherein the service information is adapted to be split into sub-tables and based on the sub-table, establishing a local table configured to announce at least one local transport

stream of certain cell containing the service, wherein the local table is adapted to be delivered to the at least one end user terminal and the local table is adapted to identify the at least one local transport stream for an announcement to adjacent transport streams, wherein said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell.” However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8. Ikeda further discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs’s system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 26**, “a method comprising: establishing service information tables, the service information tables configured to enable an end user terminal to obtain transport streams” reads on the distribution of MPEG-2

transport streams receiver (abstract) disclosed by Szucs and represented in Fig.

1. Szucs further discloses (§0003 and §0012) that the transport streams provided using either cable, terrestrial or satellite network to receiver includes full service information.

Szucs meets all the limitations of the claim except "splitting a certain service information table into sub-tables, wherein each sub-table identifies coincident local transport stream of a certain cell." However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8.

As to "the coincident local transport stream contains identification of adjacent transport streams of the coincident local transport stream, wherein said adjacent transport streams comprise transport streams of a at least one neighboring cell of said certain cell and distributing the sub-tables to an adjacent service provider of the coincident local transport stream" Ikeda discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Ikeda further discloses (col.5, lines 39-45) that when the receiver moves from one service area to another, link information is

forwarded to another service area. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 27**, "a method comprising: establishing service information configured to guide an end user terminal to discover transport streams" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (§0003 and §0012) that the transport streams provided using either cable, terrestrial or satellite network to receiver includes full service information.

Szucs meets all the limitations of the claim except "splitting the service information into sub-tables, wherein each sub-table identifies the transport stream of a certain cell and wherein the transport stream comprises a local transport stream of the certain cell, and the transport stream of the cell contains identification of transport streams of neighboring cells of the transport stream of certain cell." However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service

Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8. Ikeda further discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 28**, "a method comprising: receiving a broadcast transmission" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (§¶0001) that the system receives MPEG-2 transport streams on a network.

Szucs meets all the limitations of the claim except "discovering a mother table from the broadcast transmission, the mother table announcing a set of sub-tables each sub-table identifying a local transport stream of certain cell, wherein the transport streams indicated in the mother table comprise adjacent transport streams to each other so that said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda

discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8. Ikeda further discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 29**, "an apparatus comprising: means for receiving a broadcast transmission" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (¶0001) that the system receives MPEG-2 transport streams on a network.

Szucs meets all the limitations of the claim except "means for discovering a mother table from the broadcast transmission, the mother table announcing a set of sub-tables each sub-table identifying a local transport stream of a certain

cell, wherein the transport streams indicated in the mother table comprise adjacent transport streams to each other so that said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8. Ikeda further discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 31**, "the apparatus wherein the receiver comprises a wireless receiver for receiving the transport stream" Ikeda discloses (abstract and col.4, lines 46-49) that the transport stream is received by the mobile receiver. In addition, same motivation is used as to reject claim 29.

Regarding **claim 32**, "the apparatus wherein the end user terminal comprises a broadcast cellular mobile end user terminal" Ikeda discloses (abstract and col.4, lines 46-49) that the transport stream is received by the mobile receiver. In addition, same motivation is used as to reject claim 29.

Regarding **claim 33**, "a system comprising: at least one end user terminal configured to obtain the broadcast transport streams" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (**¶0015**) that the DVB tuner device receives transport stream.

Szucs meets all the limitations of the claim except "a head-end configured to split a service information table into sub-tables and establish a mother table, wherein each sub-table identifies a transport stream of a coincident headend, and wherein said transport stream comprises a local transport stream of a certain cell." However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8.

As to "wherein the mother table identifies the transport stream of the coincident headend and transport streams of adjacent headends to the

coincident headend, wherein said adjacent headends comprise headends of neighboring cells of said certain cell" Ikeda discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Regarding **claim 34**, "the system wherein the broadcast transport streams comprises transmission according to Digital Video Broadcasting (DVB)" Szucs discloses (§0003) that the tuner in television set receives Digital video broadcasting (DVB) services.

Regarding **claim 35**, "the system wherein the broadcast transport streams comprises a terrestrial digital video broadcasting (DVB-T)" Szucs discloses (§0028) that the transport streams carried by the broadcasting medium is terrestrial.

Regarding **claim 38**, "the system wherein the at least one end user terminal comprises a wireless broadcast receiver" Ikeda discloses (abstract and col.4, lines 46-49) that the transport stream is received by the mobile receiver. In addition, same motivation is used as to reject claim 29.

Regarding **claim 40**, "the transmitter comprising: at least one head-end configured to establish at least one service information table for enabling an end user terminal to obtain the transport streams" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig. 1. Szucs further discloses (§10003 and §10012) that the transport streams provided using either cable, terrestrial or satellite network to receiver includes full service information.

Szucs meets all the limitations of the claim except "the at least one headend further configured to split the at least one service information table into sub-tables for establishing a mother table, wherein each sub-table identifies a transport stream of a certain headend and wherein said transport stream comprises a local transport stream of a certain cell, and wherein the mother table identifies the transport stream of the certain headend and transport streams of adjacent headends to the certain headend, wherein the transport streams of the adjacent headends comprise transport streams of neighboring cells of said certain cell." However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes

information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8. Ikeda further discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

4. **Claims 13, 14, 16, 23, 30, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over Szucs in view of Ikeda as applied to claim 1 above, and further in view of US Patent 6,401,242 to Eyer at al (hereafter referenced as Eyer).

Regarding **claim 13**, "a method further comprising the step of re-transmitting the sub-table to the adjacent transport streams" Ikeda discloses (col.4, lines 33-38; col.7, lines 52-62) that the system controller controls the operation of each transmitter by generating link information of service areas based on the location of receiver. However, combination of Szucs and Ikeda does not explicitly teach that the table is re-transmitted. Eyer discloses (col.20,

lines 54-64) that the tables from region one and two are transmitted and combined together to carry the schedules/listings. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs and Ikeda's systems by transmitting table as taught by Eyer in order to allow the communication of scheduling information for television programming and also to be economical in terms of communication bandwidth (col.2, lines 61-62).

Regarding **claim 14**, "a method wherein the step of re-transmitting comprises individual re-transmitting" Eyer discloses (col.21, lines 8-12) that when a new data bundle transmitted, it's added to the bundle memory. In addition, same motivation is used as to reject claim 13.

Regarding **claim 16**, "a method wherein the sub-table is adapted to be retransmitted without any further modification of the sub-table" Szucs discloses (¶0028) that when streams are being passed onto network, the program map table is also being transmitted through without any modification.

Regarding **claim 23**, "a method wherein the transport stream comprises multicast" Eyer discloses (col.5, lines 4-5) that the channel map data is multicast addressed to decoders. In addition, same motivation is used as to reject claim 13.

Regarding **claim 30**, "the apparatus further comprising means for interaction with a service provider providing the transport stream" Eyer discloses (col.4, lines 64-68) that the channel map data table received from broadcast network provider is provided to receiver and receiver communicate with head-end by entering a channel number. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs and Ikeda's systems by transmitting table as taught by Eyer in order to allow the communication of scheduling information for television programming and also to be economical in terms of communication bandwidth (col.2, lines 61-62).

Regarding **claim 36**, "the system wherein the broadcast transport stream comprises multicast" Eyer discloses (col.5, lines 4-5) that the channel map data is multicast addressed to decoders. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs and Ikeda's systems by transmitting table as taught by Eyer in order to allow the communication of scheduling information for television programming and also to be economical in terms of communication bandwidth (col.2, lines 61-62).

5. **Claims 15 and 39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Szucs in view of Ikeda and Eyer as applied to claim 13 above, and further in view of US Patent 5,671,219 to Jensen et al (hereafter referenced as Jensen).

Regarding **claim 15**, combination of Szucs, Ikeda and Eyer meets all the limitations of the claim except "a method wherein the step of re-transmitting comprises periodic re-transmitting." However, Jensen discloses (col.13, lines 45-50) that each user station periodically receives air channel in sequence. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to transmit stream/channel periodically as taught by Jensen in order to maintain or establish communication path between user device and cell/tower (col.1, lines 25-26).

Regarding **claim 39**, "the system wherein the headends comprise cells of a cellular broadcast network and the at least one end user terminal comprise a mobile cellular digital broadcast end user terminal" Ikeda discloses (abstract and col.4, lines 46-49) that the transport stream is received by the mobile receiver. In addition, same motivation is used as to reject claim 33. However, combination of Szucs and Ikeda meets all the limitations of the claim except "headends comprise cells of a cellular broadcast network." Jensen discloses (col.3, lines 31-33, 42-50) that the channels provided to geographical locations from head-end are divided into a plurality of different cells. Jensen further discloses (col.1, lines 50-54) that the invention is used with the mobile or cellular phone system. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to use head-end as cell area as taught by Jensen in order to

establish communication paths between cellular device and cell network in as many communication environments as possible (col.1, lines 35-36).

6. **Claims 24, 37 and 41-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over Szucs in view of Ikeda, and further in view of US Patent 6,965,770 B2 to Walsh et al (hereafter referenced as Walsh).

Regarding **claim 24**, combination of Szucs and Ikeda meets all the limitations of the claim except "a method wherein the transport stream comprises unicast." However, Walsh discloses (col.3, line 7-9 and abstract) that the unicast network is used for transmitting content to end user terminal. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to use streams with unicast as taught by Walsh in order to universally routed data across the Network which allows Network to run between two known endpoints.

Regarding **claim 37**, combination of Szucs and Ikeda meets all the limitations of the claim except "a system wherein the broadcast transport stream comprises unicast." However, Walsh discloses (col.3, line 7-9 and abstract) that the unicast network is used for transmitting content to end user terminal. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to use streams with unicast as taught by Walsh in order to universally routed data across the Network which allows Network to run between two known endpoints.

Regarding **claim 41**, "a computer-readable medium having computer executable instructions that, when executed, cause a computer to perform a method comprising: establishing at least one service information table configured to enable an end user terminal to obtain the transport streams configured to be transmitted by a digital broadcast network" reads on the distribution of MPEG-2 transport streams receiver (abstract) disclosed by Szucs and represented in Fig.

1. Szucs further discloses (§0003 and §0012) that the transport streams provided using either cable, terrestrial or satellite network to receiver includes full service information.

Szucs meets all the limitations of the claim except "splitting the at least one service information table into sub-tables, wherein each sub-table identifies a certain transport stream, and wherein said transport stream comprises a local transport stream of a certain cell; establishing a mother table configured to maintain a sub-table of the certain transport stream and sub-tables of adjacent transport streams of the certain transport stream, wherein said adjacent transport streams comprise transport streams of at least one neighboring cell of said certain cell." However, Ikeda discloses (col.8, lines 14-18) that the Network Information Table contains a link descriptor of a region, which describes information necessary for identifying the program provided, in the Service Information. Ikeda further discloses (col.9, lines 12-18; col.10, lines 28-33) that each service area includes service ID for their areas as represented in Fig. 8.

Ikeda further discloses (col.4, lines 57-63; col.7, lines 58-62; col.10, lines 28-33) that the link information is generated that shows the transport stream or a program being broadcast in the service area and the programs being broadcast in adjacent service areas as represented in Figs. 1 and 8. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify Szucs's system by using SI to create tables and main table for different service areas as taught by Ikeda in order to provide a continuous reception of a broadcast program/channel even when audience moves from a service area to another service area (col.2, lines 20-24).

Combination of Szucs and Ikeda meets all the limitations of the claim except "a computer-readable medium having computer-executable instructions." However, Walsh discloses (col.2, lines 27-36) that the content device includes a memory for storing computer readable instructions that executed by processor on the computer device. Therefore, it would have been obvious to one ordinary skills in the art at the time of the invention to write and execute a program on computer medium as taught by Walsh in order to efficiently use the computer program to do the above-mentioned operations and also it would have yielded a predictable result to one ordinary skilled in the art.

Regarding **claim 42**, "the computer-readable medium wherein the computer executable instructions, when executed, cause the computer to build a local table based on the sub-table of the certain transport stream" Ikeda

discloses (col.5, lines 27-32) that the transmitter transmits service list of the programs offered in the service area. In addition, same motivation is used as to reject claim 41.

Regarding **claim 43**, "the computer-readable medium wherein the computer executable instructions, when executed, cause the computer perform a handover function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another as represented in Fig. 1. In addition, same motivation is used as to reject claim 41.

Regarding **claim 44**, "the computer-readable medium wherein the computer executable instructions, when executed, cause the computer perform a roaming function for the transport streams when a mobile end user terminal is moving from a cell of the certain transport stream to any adjacent transport stream" Ikeda discloses (col.4, lines 33-38) that when the receiver moves from one service area to another service area, broadcasting being transmitted is switched from one transmitter to another to maintain communication as represented in Fig. 1. In addition, same motivation is used as to reject claim 41.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PINKAL CHOKSHI whose telephone number is (571) 270-3317. The examiner can normally be reached on Monday-Friday 8 - 5 pm (Alt. Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pinkal Chokshi/
Examiner, Art Unit 2425

/Brian T. Pendleton/
Supervisory Patent Examiner, Art Unit 2425